ABSTRACT

The object of the present invention is to use a new communication method in a time-driven distributed real-time computer system to simplify the interface between the communication controller and a host computer in such a manner that the communication controller autonomously distinguishes between status data and event data and preprocesses the status data according to the status data semantics and the event data according to the event data semantics. Using this method, deterministic communication channels for the flexible transmission of event data can be constructed on a time-driven basic communication system. Different higher protocols, such as CAN or the OMG *Internet Inter-ORB Protocol* (IIOP), can then be implemented on these flexible event channels so that the known interfaces of these protocols can be made available to the host computer at the CNI (communication network interface). By pre-processing the information in the communication controller in a differentiated manner, composability during the transmission of event data can be attained, the operating system in the host computer can be simplified and the real-time performance of the host computer can be significantly improved. Furthermore, existing legacy software, such as for the CAN system, can be adopted without important changes.